



## Ensuring Farm Safety: From Hazards to Preparedness

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Farm safety is important to protect the health and safety of farmers, farm workers, and their families. It can also help to reduce the number of farm accidents and injuries, prevent property damage, improve productivity and profitability, and protect the environment. According to a report presented by Gite (2009), India experiences approximately 7.6 lakh agricultural accidents annually, leading to the tragic loss of around 45,000 workers' lives and causing injuries to many others. These accidents result in a substantial economic loss to the country, estimated at about Rs. 5400 crores. The primary causes of these farm accidents include tractor overturns (constituting 27% of all incidents), falls (contributing to 23% of accidents), entanglements, and amputations (accounting for 14% of cases), suffocation (making up 9% of accidents), and burns (comprising 8% of all incidents). The most vulnerable groups are young men, making up approximately 70% of the victims, and landless laborers, disproportionately affected at about 60%. Notably, the states with the highest rates of farm accidents in India are Madhya Pradesh, Uttar Pradesh, Bihar, Maharashtra, and Andhra Pradesh.

Farmers and farm workers are exposed to a variety of hazards, including machinery and equipment, animals, chemicals, and weather. By following safety precautions, such as wearing appropriate safety gear, operating machinery and equipment safely, being aware of your surroundings, and never working alone, farmers and farm workers can help to prevent accidents and injuries.

**Machinery Safety:** Receiving proper training for the safe operation of farm machinery is of paramount importance. This training encompasses not only the fundamentals of machinery operation but also crucial safety procedures, including strategies to prevent rollovers and entanglements. Ensuring the safety of both the operator and the farm environment requires regular maintenance and thorough inspections of the equipment. By doing so, potential hazards can be promptly identified and corrected, guaranteeing that the machinery operates in a secure manner. One key safety feature that should never be overlooked is the implementation of tractor and equipment rollover protection structures (ROPS). These sturdy metal structures are specifically designed to safeguard operators in the event of a rollover, making them an indispensable element of farm machinery safety, and their use should be mandatory whenever these machines are in operation.

**Chemical Handling and Storage:** Safe storage and handling of pesticides, fertilizers, and other chemicals is paramount to prevent accidents and environmental harm. It is crucial to store chemicals in their original containers, refraining from transferring them to smaller bottles, and to keep them in a cool, dry, well-ventilated area, away from heat, sunlight, and ignition sources, with clear labels out of the reach of children and pets. When handling chemicals, always wear appropriate personal protective equipment (PPE) such as gloves,

goggles, and a respirator, and remember to wash hands thoroughly afterward. The importance of reading labels and adhering to instructions cannot be overstated; always carefully read labels, follow instructions, including safety precautions and disposal guidelines, and never mix chemicals unless explicitly directed. Damaged or unreadable labels should be a warning not to use the chemicals. Equally vital is the proper disposal of chemical containers: take them to a hazardous waste disposal facility, never burn, bury, or throw them in the trash, as these practices can have severe consequences for both health and the environment.

**Weather and Environmental Hazards:** Stay safe while working in extreme weather conditions by taking precautions against heatstroke, hypothermia, lightning, flash flooding, and tornadoes. Recognize the symptoms of heatstroke and hypothermia, and if someone is affected, move them to a cooler or warmer place, respectively. Seek shelter in a building or vehicle during thunderstorms, crouch in a low area if no shelter is available, and avoid metal objects. Be vigilant about flash flooding, especially in flood-prone areas, and move to higher ground if needed. Have a tornado plan in tornado-prone regions, take shelter in a basement or interior room during warnings. Protect against weather-related risks by wearing appropriate clothing, staying hydrated, taking breaks in shaded or air-conditioned areas, and avoiding direct sunlight during peak heat. Know the symptoms of heatstroke and hypothermia and seek medical help if needed. By adhering to these guidelines, you can ensure farm safety during extreme weather conditions.

**Fire Prevention:** To ensure the proper storage and handling of flammable materials, it's essential to store them in a cool, dry, well-ventilated area, away from heat sources, and keep them in their original containers, avoiding pouring them into smaller bottles. Clearly label these materials and store them out of reach of children and pets, while refraining from smoking near them to prevent fire risks. Installing fire extinguishers throughout the farm is crucial, ensuring everyone knows how to use them, testing them regularly for functionality, and keeping them easily accessible. Additionally, creating firebreaks around the farm's perimeter, maintaining safe distances from flammable structures, clearing away debris and vegetation that could fuel fires, and being vigilant about local fire hazards are all essential steps to protect the farm from potential fire dangers.

**Emergency Preparedness:** To ensure farm safety during emergencies, a well-developed emergency action plan is crucial. This plan, a written document, should clearly outline responsibilities, evacuation procedures, and how to contact emergency services. Regular review and updates are essential. All farm members, including employees and family, should be familiar with this plan. Additionally, providing first aid training is vital, empowering individuals to identify and treat common injuries and illnesses. First aid kits, fully stocked and strategically placed in risk-prone areas across the farm, are indispensable, and everyone should be adept at using them. Memorizing emergency contact numbers, including local services and healthcare providers, is essential for swift action during crises. Maintaining a visible list of these numbers in the home or on the farm is a wise precautionary measure.

**Resources and Support:** The Indian government has taken significant strides in enhancing farm safety through various initiatives. The National Agricultural Insurance Scheme (NAIS) safeguards farmers from crop losses due to natural disasters, bolstering their financial stability and reducing risky behavior. The Pradhan Mantri Fasal Bima Yojana (PMFBY) goes a step further, offering broader coverage, including losses from pests and diseases. The Rashtriya Krishi Vikas Yojana (RKVY) provides financial aid to states for diverse agricultural development activities, enabling projects like safety fences and protective equipment. The National Rural Health Mission (NRHM) supports healthcare in rural areas, facilitating the creation of rural hospitals and preventive healthcare services. The National Institute of Occupational Health (NIOH) conducts crucial research on occupational health and safety, offering vital technical assistance to agricultural workers. Moreover, non-

governmental organizations (NGOs) contribute significantly by imparting farm safety training and advocating for higher safety standards. While progress has been made, the government's ongoing commitment to providing resources and support can further mitigate farm accidents and injuries, ensuring a safer environment for farmers.

### Conclusion

Prioritizing farm safety is not just a matter of compliance but a crucial step in protecting lives, property, and the environment. By adhering to proper machinery operation, careful chemical handling, weather awareness, fire prevention, emergency preparedness, and utilizing available resources, farmers can significantly reduce accidents and injuries. Collaboration with local farm safety organizations, leveraging online resources, and promoting a culture of safety within the farming community can lead to a safer and more productive agricultural sector.

### References

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